

Status of the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A CaF₂ cube comprising:
an uncoated CaF₂ prism;
a coated CaF₂ prism coupled to said uncoated CaF₂ prism, the coated CaF₂ prism including,
a first coating section having a multi-layered coating, and
a second coating section formed on top of said first coating section, said second coating section having a contact layer coating,
wherein the CaF₂ cube transmits deep ultra violet or vacuum ultra violet wavelengths of light substantially without absorption.
2. (currently amended) The CaF₂ cube of claim 1, wherein said contact layer coating is a SiO₂ coating.
3. (currently amended) The CaF₂ cube of claim 1, wherein said contact layer coating is a fused silica coating.
4. (currently amended) The CaF₂ cube of claim 1, wherein the CaF₂vcube is a polarizing cube.
5. (currently amended) The CaF₂ cube of claim 1, wherein the CaF₂cube is a beam splitter.

6. (currently amended) An A CaF₂ optical device comprising:
an a uncoated CaF₂ optical element;
a coated CaF₂ optical element coupled to a surface of said uncoated CaF₂
optical element, the coated CaF₂ optical element including,
a multi-layered coating formed on said surface, and
a contact layer coating formed on said multi-layered coating,
wherein the CaF₂ optical device transmits deep ultra violet or vacuum
ultra violet wavelengths of light substantially without absorption.

7. (currently amended) The CaF₂ optical device of claim 6, wherein said contact layer coating is a SiO₂ coating.

8. (currently amended) The CaF₂ optical device of claim 6, wherein said contact layer coating is a fused silica coating.

9. (currently amended) The CaF₂ optical device of claim 6, wherein said uncoated and said coated CaF₂ optical elements are prisms.

10. (currently amended) The CaF₂ optical device of claim 6, wherein said uncoated CaF₂ optical element and said coated CaF₂ optical element are coupled together to form a polarizing cube.

11. (currently amended) The CaF₂ optical device of claim 6, wherein said uncoated CaF₂ optical element and said coated CaF₂ optical element are coupled together to form a beam splitter.

12. (new) The CaF₂ cube of claim 1, wherein the wavelength of light is about 157 nm, which is transmitted through the CaF₂ cube substantially without absorption.

13. (new) The CaF₂ optical device of claim 6, wherein the wavelength of light is about 157 nm, which is transmitted through the CaF₂ optical device substantially without absorption.